EXHIBIT 15

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commands i n a pat h program . The error sel ection turns the process veri fication check on and off.   The error ON/OFF selection cannot be overridden by commands in a path program.

[F1] **EXIT** – Leave Flow mode and return to Cycle Stop.

[F3] **cc UP** – Increase the material target level. Maximum is 99 cc.

[F4] **cc DOWN** – Decrease the material target level. Minimum is 0.00 cc.

[F5] **DEV UP** – Increase the allowable deviation. Maximum is 99%.

[F6] **DEV DOWN** – Decrease the allowable deviation. Minimum is 0%.

[F7] **Error ON** – Turn the material flow error checking on. (default)

[F8] **Error OFF** – Turn the material flow error checking off.

Calibration Procedures

The workcell has one of t hree calibration methods: St andard, Operator Defined and Sensor Defi ned. If a Sensor Defined or Operat or Defined method is installed on the workcell, the machine may or m ay not automatically enter its particular calibration mode following the homing sequence depending on the application the workcell was set up for. See page 32 for particulars on operating the workcell during a calibration sequence.

Standard Needle Calibration

The simplest calibration procedure requires the operator to visually inspect the position of a needle with respect to a calibration point (such as cross-hai rs). If t he needle is not di rectly above t he point, the operator must physically reposition the needle so it is above the calibration point.

Operator Defined Needle Calibration

This method is dependent upon the operator utilizing the trackball to redefine the coordinate system according to the positioning of a speci fic needle or di spense head. This process is o ptional. If the specific needle is located in the desired position this process can be skipped.

The calibration routine automatically runs when the machine is powered on or if the controller is reset. Th e head moves to a calibration point (specified in the main program). When at the calibration *position* the operator has control of the axes. Using the trackball, the position of the n eedle tip can b e red efined in reference to a calib ration point (such as cross-hai rs). This process can al so be run manually through the CAL function key if a needle needs to be replaced for any reason during operation.